Field Crops Research, 27 (1991) 394–396
Elsevier Science Publishers B.V., Amsterdam

Contents of *Field Crops Research*, Volume 27

VOL. 27 NOS. 1, 2 **AUGUST 1991**

Sprout and stem development from potato tubers of differing physiological age: the role of apical dominance
R.K.M. Hay and J. Hampson (Ayr, UK) 1
Cultivar and environmental effects on growth and development of peanuts (*Arachis hypogaea* L.) I. Emergence and flowering
M.J. Bell (Kingaroy, Qld., Australia), R. Shorter (Brisbane, Qld., Australia) and R. Mayer (Townsville, Qld., Australia) 17
Cultivar and environmental effects on growth and development of peanuts (*Arachis hypogaea* L.) II. Reproductive development
M.J. Bell (Kingaroy, Qld., Australia), R. Shorter (Brisbane, Qld., Australia) and R. Mayer (Townsville, Qld., Australia) 35
Some analytical aspects of cassava/maize/okra/egusi-melon complex mixture: I. Soil temperature in relation to leaf-area variation
J.E.G. Ikeorgu (Awkuzu, Nigeria) and H.C. Ezumah (Ibadan, Nigeria) 51
Adaptation to water-deficit in chickpea breeding lines by osmoregulation: relationship to grain yields in the field
J.M. Morgan (Tamworth, N.S.W., Australia), B. Rodriguez-Maribona (Madrid, Spain) and E.J. Knights (Tamworth, N.S.W., Australia) 61
Seed yield and agronomic traits of old and modern soybean cultivars under irrigation and soil water-deficit
J.R. Frederick, J.T. Woolley, J.D. Hesketh and D.B. Peters (Urbana, IL, USA) 71
Response of growth and yield components of linseed to the onset or relief of nitrogen stress at several stages of crop development
P.J. Hocking and A. Pinkerton (Canberra, A.C.T., Australia) 83
Responses of seven diverse rice cultivars to water deficits. III. Accumulation of abscisic acid and proline in relation to leaf water-potential and osmotic adjustment
M. Dingkuhn (Manila, Philippines), R.T. Cruz, J.C. O'Toole (New Delhi, India), N.C. Turner (Wembley, W.A., Australia) and K. Doerffling (Hamburg, Germany,) 103
Prediction of flag-leaf emergence in wheat crops
R.A.C. Mitchell (Herts, UK), E. White (Belfast, UK) and R. Sylvester-Bradley (Cambridge, UK) 119
Three-way methods for multiattribute genotype×environment data: an illustrated partial survey
K.E. Basford (St. Lucia, Qld., Australia), P.M. Kroonenberg (Leiden, Netherlands) and I.H. DeLacy (St. Lucia, Qld., Australia) 131
Test of leaf-area development in CERES-Maize: a correction
P.S. Carberry (Aitkenvale, Qld., Australia) 159
Selection of stable varieties by minimizing the probability of disaster
K.M. Eskridge, P.F. Byrne and J. Crossa (Lincoln, NE, USA) 169

Field Crops Research, 27 (1991) 394–396
Elsevier Science Publishers B.V., Amsterdam

Contents of *Field Crops Research*, Volume 27

VOL. 27 NOS. 1, 2 **AUGUST 1991**

Sprout and stem development from potato tubers of differing physiological age: the role of apical dominance
R.K.M. Hay and J. Hampson (Ayr, UK) 1
Cultivar and environmental effects on growth and development of peanuts (*Arachis hypogaea* L.) I. Emergence and flowering
M.J. Bell (Kingaroy, Qld., Australia), R. Shorter (Brisbane, Qld., Australia) and R. Mayer (Townsville, Qld., Australia) 17
Cultivar and environmental effects on growth and development of peanuts (*Arachis hypogaea* L.) II. Reproductive development
M.J. Bell (Kingaroy, Qld., Australia), R. Shorter (Brisbane, Qld., Australia) and R. Mayer (Townsville, Qld., Australia) 35
Some analytical aspects of cassava/maize/okra/egusi-melon complex mixture: I. Soil temperature in relation to leaf-area variation
J.E.G. Ikeorgu (Awkuzu, Nigeria) and H.C. Ezumah (Ibadan, Nigeria) 51
Adaptation to water-deficit in chickpea breeding lines by osmoregulation: relationship to grain yields in the field
J.M. Morgan (Tamworth, N.S.W., Australia), B. Rodriguez-Maribona (Madrid, Spain) and E.J. Knights (Tamworth, N.S.W., Australia) 61
Seed yield and agronomic traits of old and modern soybean cultivars under irrigation and soil water-deficit
J.R. Frederick, J.T. Woolley, J.D. Hesketh and D.B. Peters (Urbana, IL, USA) 71
Response of growth and yield components of linseed to the onset or relief of nitrogen stress at several stages of crop development
P.J. Hocking and A. Pinkerton (Canberra, A.C.T., Australia) 83
Responses of seven diverse rice cultivars to water deficits. III. Accumulation of abscisic acid and proline in relation to leaf water-potential and osmotic adjustment
M. Dingkuhn (Manila, Philippines), R.T. Cruz, J.C. O'Toole (New Delhi, India), N.C. Turner (Wembley, W.A., Australia) and K. Doerffling (Hamburg, Germany,) 103
Prediction of flag-leaf emergence in wheat crops
R.A.C. Mitchell (Herts, UK), E. White (Belfast, UK) and R. Sylvester-Bradley (Cambridge, UK) 119
Three-way methods for multiattribute genotype×environment data: an illustrated partial survey
K.E. Basford (St. Lucia, Qld., Australia), P.M. Kroonenberg (Leiden, Netherlands) and I.H. DeLacy (St. Lucia, Qld., Australia) 131
Test of leaf-area development in CERES-Maize: a correction
P.S. Carberry (Aitkenvale, Qld., Australia) 159
Selection of stable varieties by minimizing the probability of disaster
K.M. Eskridge, P.F. Byrne and J. Crossa (Lincoln, NE, USA) 169

VOL. 27 NO. 3 OCTOBER 1991

Crop physiology and breeding for drought tolerance: research and development
L.K. Fussell (Niamey, Niger), F.R. Bidinger (Andhra Pradesh, India) and P. Bieler (Niamey, Niger) 183
Breeding for cold hardiness in winter wheat: problems, progress and alien gene expression
A.E. Limin and D.B. Fowler (Saskatoon, Sask., Canada) 201
Improvement of plant mineral nutrition through breeding
R.B.Clark (Lincoln, NE, USA) and R.R. Duncan (Griffin, GA, USA) 219
High-temperature-acclimation potential of the common bean: can it be used as a selection criterion for improving crop performance in high-temperature environments?
P.H. Li, D.W. Davis (St. Paul, MN, USA) and Z.-Y. Shen (Beijing, China) 241
Early results of evaluation of Naney × Parinary *Theobroma cacao* L. double-cross progenies in Nigeria
A.A. Ojo, J.O. Sanwo and E.B. Esan (Ibadan, Nigeria) 257
Promiscuity and responses to rhizobial inoculation of tropical kudzu (*Pueraria phaseoloides*
R. Sylvester-Bradley, D. Mosquera, N.M. Asakawa and G. Sanchez (Cali, Colombia) 267
Potential yield of maize, determined by rates of growth and development of ears
B.C. Jacobs and C.J. Pearson (Sydney, N.S.W., Australia) 281

Erratum 299

VOL. 27 NO. 4 NOVEMBER 1991

Carbon isotope discrimination and grain-yield in barley
P.Q. Craufurd, R.B. Austin (Norwich, UK), E. Acevedo (Aleppo, Syria) and M.A. Hall (Cambridge, UK) 301
Nitrogen uptake by deepwater rice during the pre-flood and flooded phases, in relation to dry-matter and grain production
D.W. Puckridge, A. Wiengweera, P. Thongbai, P. Sangtong, A. Sattarasart, M. Kongchum and S. Runtan (Bangkok, Thailand) 315
A test of the computer simulation model ARCWHEAT1 on wheat crops grown in New Zealand
P.D. Jamieson (Christchurch, New Zealand), J.R. Porter (Bristol, UK) and D.R. Wilson (Christchurch, New Zealand) 337
Wheat production in an arid environment. 1. Water-use efficiency of wheat, as affected by management practices
J. Amir, J. Krikun (Mobile Post Negev 2, Israel), D. Orion, J. Putter (Bet Dagan, Israel) and S. Klitman (Mobile Post Negev 2, Israel) 351
Wheat production in an arid environment. 2. Role of soil pathogens
J. Amir, J. Krikun (Negev Mobile Post 2, Israel), D. Orion, J. Putter (Bet Dagan, Israel) and S. Klitman (Negev Mobile Post 2, Israel) 365
Chickpea, *Cicer arietinum*: a new host for the pea leaf weevil, *Sitona lineatus*
L. Williams, III, L.E. O'Keeffe and D.J. Schotzko (Moscow, ID, USA) 377

Book Reviews
Theoretical production ecology 381
Physiology of tropical crop production 382
Plant protoplasts and genetic engineering 384
Plant breeding 385

Author Index 387
Subject Index 390
Announcements 393
Contents of *Field Crops Research*, Volume 27 394